

REMARKS

Applicants have amended the specification to add section subheading as requested by the Examiner, and to capitalize the term “LUXOR®.” Applicants respectfully submit that the term “LUXOR®” is capitalized wherever it appears and is accompanied by the generic terminology colloidal silica.

Applicants have also canceled the unelected claims 9-11 without prejudice or disclaimer.

Accordingly, claims 1-8 and 12 remain pending in the application.

CLAIM OBJECTIONS

Applicants respectfully traverse the objection to the claim term “more than one sub-layer.” Indeed, Applicants respectfully submit that the claim clearly recites that the dielectric layer (itself) has more than one sub-layer. As disclosed in the Specification, “preferably the dielectric layer comprises more than one sub-layer. The occurrence of pin holes is reduced by application of more than one sub-layer” (page 2, lines 24-25).

Accordingly, Applicants respectfully request that the Examiner withdraw the objection to claim 3.

35 U.S.C. § 102

The Office Action rejected claims 1, 2, 4-6 and 12 under 35 U.S.C. § 102 over Ushifusa et al. U.S. Patent 5,818,168 (“Ushifusa”).

Applicants traverse those rejections for at least the following reasons.

Among other things, the display device of claim 1 includes a dielectric layer separating electrodes from a discharge chamber, where the dielectric layer includes a transparent metal oxide matrix **in which alkyl groups are present**.

respectfully submits that Ushifusa does not disclose a display device that includes a dielectric layer separating electrodes from a discharge chamber, where the dielectric layer includes a transparent metal oxide matrix **in which alkyl groups are present**.

The Office Action states that Ushifusa discloses that “the dielectric layer includes silicon oxide in which trimethylborate is present,” citing col. 9, lines 4+.

Applicants respectfully disagree.

The cited text discloses that an organometallic gel (such as trimethylborate) is used as a precursor in **the formation of** the dielectric layer. However, Applicants respectfully submit that **it does not disclose that alkyl groups are present in the formed dielectric layer**. Ushifusa teaches that the organometallic gel is applied as a precursor which is then subsequently changed to a metal oxide and a hydrolysis product, by a heat treatment (see, e.g., col. 9, lines 18-20; col. 24, lines 9-27 col. 28, lines 41-48).

Meanwhile, the organometallic gels disclosed by Ushifusa all comprise a “pure” metal alkoxide of the form $M(OR)$, such as that disclosed in the Background & Summary section of the Specification of the present application. Indeed, one of the very organometallic gels mentioned by Ushifusa in the cited text at col. 9, lines 4+ is

n-butanol solution comprising $\text{Si}(\text{OC}_4\text{H}_9)_4$, the very same precursor compound disclosed in the Background & Summary section of the Specification of the present application on page 1, lines 19-23. With such “pure” metal alkoxides, during the conversion process the alkoxy (-Oalkyl) groups react with one another to form a metal atom-O network and a hydrolysis byproduct.

In contrast, as disclosed in the present specification, in one embodiment the dielectric layer is formed with a “precursor layer comprising a metal alkoxide comprising, bound to the metal atom, an alkyl group” (page 2, lines 29-31). The specification discloses two exemplary precursor compounds of this class: dimethyldimethoxysilane (DMDMS) and methyltrimethoxysilane (MTMS). During conversion (when heated), the alkyl group or groups in these compounds do not take part on the reactions between the alkoxy (-Oalkyl) groups, and their remaining presence renders the dielectric layer more resistant to the formation of cracks and make it possible to provide thicker layers. Applicants respectfully submit that Ushifusa does not disclose or suggest the benefits of employing a precursor layer comprising a metal alkoxide having an alkyl group bound to the metal atom.

In short, Applicants respectfully submit that Ushifusa does not disclose or suggest that alkyl groups are present in the resultant dielectric layer. Therefore, Ushifusa does not disclose the display device of claim 1.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 1 is patentable over Ushifusa.

Claims 2, 4-6 and 12

Claims 2, 4-6 and 12 depend from claim 1 and are deemed patentable over Ushifusa for at least the reason set forth above with respect to claim 1.

35 U.S.C. § 103

The Office Action rejected claims 3, 7, and 8 under 35 U.S.C. § 103 over Ushifusa in view of Ernsthausen.

Applicants respectfully traverse those rejections for at least the following reasons.

Claims 3, 7 and 8 depend from claim 1. Applicants respectfully submit that Ernsthausen does not cure the defects of Ushifusa with respect to claim 1 as discussed above.

Accordingly, for at least these reasons, Applicants respectfully submit that claims 3, 7 and 8 are patentable over Ushifusa.

CONCLUSION


In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 1-8 and 12, and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (703) 715-0870 to discuss these matters.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

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